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/*
Ant Project. Otago Polytechnic, New Zealand. 2009 3rd Year B.I.T. project for
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Client: Otago Museum

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*/
package {
import flash.display.*;
import flash.events.*;
import flash.geom.*;

public class TFood extends MovieClip {
    // Constants
    private const _maxStr: Number = 720; // maximum strength of the pheromone trail
                                         // from the food back to the nest.

    // Variables
    private var pathX: Number; // the x point of the end of the phromone trail
    private var pathY: Number; // the y point of the end of the phromone trail
    private var pathStr: Number; // This is the current strength of the pheromone trail.
                                // This decreases over time
    private var hasPath: Boolean; // indicates if the food has a phromone trail
    private var counter: Number; // timer to indicate when the food changes position
    private var sWidth: Number; // screen width
    private var sHeight: Number; // screen height

    public function TFood(newX:Number, newY:Number, sW: Number, sH: Number) {
        x = newX; // set the x position of the food
        y = newY; // set the y position of the food

        rotation = Math.random() * 360; // set the angle the food is at

        sWidth = sW; // set the screen width
        sHeight = sH; // set the screen height

        gotoAndStop(42); // go to the last frame of the food movie clip

        pathX = newX; // set the phromone trail x position
        pathY = newY; // set the phromone trail y position
        pathStr = 0; // set the phromone trail strength to zero
        hasPath = false; // set the food hasPath variable to false

        // counter to move objects every 1 hr ± 100 frames
        counter = Math.floor(Math.random() * 200) + 43200;
    }

    // update food frame to show
    public function ChangeFrame(frame: Number) {
        gotoAndStop(frame);
    }

    // return the frame we are showing
    public function GetCurrFrame() {
        return currentFrame;
    }

    // return the foods x location
    public function GetX(): Number {
        return x;
    }

    // return the foods y location
    public function GetY(): Number {
        return y;
    }

    // return where the end of the trail is (x pos)
    public function GetPathX(): Number {
        return pathX;
    }

    // return where the end of the trail is (y pos)
    public function GetPathY(): Number {
        return pathY;
    }

    // return the strength of the path
    public function GetPathStr(): Number {
        return pathStr;
    }
}

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// return whether the food has a path or not
public function GetHasPath(): Boolean {
    return hasPath;
}

// update path end x location
public function SetPathX(newX: Number): void {
    pathX = newX;
}

// update path end y location
public function SetPathY(newY: Number): void {
    pathY = newY;
}

// update the path strength
public function SetPathStr(newStr: Number): void {
    // if less than maximum strength, set to new value
    if(newStr < _maxStr) {
        pathStr = newStr;
    } else {
        // else set to max strength value
        pathStr = _maxStr;
    }

    // if the strength is not equal to 0, set has path to true
    if(pathStr != 0) {
        hasPath = true;
    } else {
        hasPath = false;
    }
}

// update has path variable
public function SetHasPath(path: Boolean): void {
    hasPath = path;
}

// reset the trail, set x, y and has path variables to default
public function ResetPath(): void {
    // set the phomone trail x end point to the food x location
    pathX = x;
    // set the phomone trail y end point to the food y location
    pathY = y;
    // set his path back to false
    hasPath = false;
}

// if the counter is 0, call MoveFood() function
public function DecrementCounter(): void {
    if (counter == 0) {
        MoveFood();
        // otherwise, continue decrementing the counter
    } else {
        counter--;
    }
}

public function MoveFood(): void {
    // if the food doesn't have a path, and isn't visible,
    // move it to a new location.
    // this will be called until the food gets moved.
    if ((!hasPath) && (currentFrame == 42)) {
        // pick a random x location in the ant area
        x = 100 + (Math.random() * (sWidth - 200));
        // pick a random y location in the bottom half of the ant area
        y = sHeight - (Math.random() * (sHeight / 2));
        // pick a random rotation
        rotation = Math.random() * 360;

        // reset the counter after moving the food
        counter = Math.floor(Math.random() * 200) + 43200;
    }
}
} // End Class
} // End Package

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